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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MULLINS, BURTON S

ART UNIT PAPER NUMBER

2834

DATE MAILED: 05/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,554

Applicant(s)

KIM ET AL.

Examiner

Burton S. Mullins

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 8-9 and 10(b) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).
3. The drawings are objected to under 37 CFR 1.83(a) because they do not number or show the "side face" as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: In "Description of the Drawings" there is no description of Figs.6(a)&6(b) and 10(a)&10(b).

Appropriate correction is required.

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Claim Objections

5. Claims 1-3 are objected to because of the following informalities: Various egregious errors of grammar exist in the claims and should be corrected. For instance, in claim 1, "being wounded" should be --wound--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, "one of said slot" is indefinite. Plural slots have been recited. In claim 2, recitation "...constructed by partially performing winding work of said armature windings to a plurality of divided cores" makes no sense. Recitation "and then assembling said plurality of divided cores into a cylindrical shape and containing said armature windings spreading over said divided cores into the individual slots" makes no sense.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Broadway et al. (US 3,673,477). Broadway teaches a motor stator comprising a stator core (not shown, with slots 1-36, Fig.1c) having an even number of slots (eight) per pole per phase;

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and three-phase armature windings A/B/C contained in said slots (Fig.1c), said armature windings being wound in a single layer distributed winding (Fig.1c), wherein one of said slots arranged between two of said slots containing a first armature winding (e.g., slots 1 and 8 containing first armature winding phase A) contains a second armature winding for a phase different from a phase of said first armature winding (slot 3 containing second armature winding phase -C), and one of said slots arranged between said two of slots containing said first armature winding contains a third armature winding (slot 2 containing third armature winding phase -C) for a phase equal to the phase of said second armature winding, wherein one of the said second armature winding and said third armature winding is arranged in a coil end portion in an outer peripheral side of said first armature winding A (-C in slot 3 is in the "upper layer" Fig.1c) with the other arranged in an inner peripheral side of said first armature winding A (-C in slot 2 is in the "lower layer" Fig.1c).

Regarding claim 3, as best understood, the coil ends of the coils in Broadway are arranged at the side faces of the yoke portions.

Regarding claim 4, the motor of Broadway inherently includes a rotor.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broadway in view of Kakutani et al. (US 6,141,865). Broadway does not teach details of the stator coil manufacture. Kakutani teaches a method of manufacturing a divided stator comprising laminated stamped segments 14 (Fig.6) inserted into openings 48 formed by jig 34 to form a cylindrical shape, wherein the segments 14 contain the windings 16 spread out over the divided core and located in the individual slots between the segments. The apparatus and method of Kakutani makes possible an efficient winding operation.

It would have been obvious to provide a method of divided stator manufacture per Kakutani for the motor of Broadway since it would have been desirable to efficiently wind the motors during manufacture.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broadway in view of Auinger (US 4,127,787). Broadway teaches a "mover," i.e., a rotor, but does not teach a linear motor configuration for the motor, per se.

Auinger teaches three-phase, induction linear motor with windings capable of pole-changing. Further, Auinger teaches that a rotary machine may also be converted to a linear machine (c.18, lines 31-34).


It would have been obvious to one of ordinary skill to modify Broadway and provide a linear motor since, as disclosed by Auinger, rotary machines may be converted to linear machines.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 305-7063. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 305-1341 for regular communications and 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.


Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
May 13, 2002